

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/10867

A. CLASSIFICATION OF SUBJECT MATTER IPC(7) : A61K 31/415 US CL : 514/405; 548/359.1 According to International Patent Classification (IPC) or to both national classification and IPC				
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) U.S. : 514/405; 548/359.1 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) CAS				
C. DOCUMENTS CONSIDERED TO BE RELEVANT				
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.		
A	US 4,349,559 (BELL et al) 14 September 1982, column 6.	1-24		
A	US 4,412,995 (BELL et al) 1 November 1983, columns 7-8.	1-24		
A	US 4,349,558 (BELL et al) 14 September 1982, column 6.	1-24		
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.				
<table border="0"> <tr> <td> * Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed </td> <td> "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family </td> </tr> </table>			* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family			
Date of the actual completion of the international search 26 August 2003 (26.08.2003)		Date of mailing of the international search report 24 NOV 2003		
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703)305-3230		Authorized officer Robert Bell-Hamilton Telephone No. (703) 308-0196		

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Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claim Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claim Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claim Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:
Please See Continuation Sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☒ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.: 1-24
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

☐
☐

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.

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The inventions do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding technical features that defines a contribution over the prior art. The compounds claimed contain benzindazole moiety, which does not define a contribution over the prior art (as can be seen by the compound I of CAS:113:152403). Each of the inventions in this applications represent a discrete compound which one skilled in the art which beside sharing no structural element, cannot be said to belong to a recognized class of chemical compounds. Accordingly, the unity of invention is considered to be lacking and restriction of the invention in accordance with the rules of unity of invention is considered to be proper.

BOX II. OBSERVATIONS WHERE UNITY OF INVENTION IS LACKING

This application contains the following inventions or groups of inventions which are not so linked as to form a single inventive concept under PCT Rule 13.1. In order for all inventions to be searched, the appropriate additional search fees must be paid.

- I Claims 1-24, in part, drawn to products of formula I, wherein K is NR3 and J is NR1, L is C(R5)(R6), and R1, R3, R5, and R6 are not HET or alkyl-HET; X, Y, R7, R8, R10, R11, and R12 are not HET or alkyl-HET; and their methods of use.
- II Claims 1-24, in part, drawn to products of formula I, wherein L is NR5 and J is NR1, K is C(R3)(R4), and R1, R3, R4, and R5 are not HET or alkyl-HET; X, Y, R7, R8, R10, R11, and R12 are not HET or alkyl-HET; and their methods of use.
- III Claims 1-24, in part, drawn to products of formula I, wherein K is NR3 and J is NR1, L is C(R5)(R6), and R1, R3, R5, and R6 are not HET or alkyl-HET; X, Y, R7, R11, and R12 are not HET or alkyl-HET; and R8 or R10 is thiazole; and their methods of use.
- IV Claims 1-24, in part, drawn to products of formula I, wherein K is NR3 and J is NR1, L is C(R5)(R6), and R1, R3, R5, and R6 are not HET or alkyl-HET; X, Y, R7, R11, and R12 are not HET or alkyl-HET; and R8 or R10 is pyridine; and their methods of use.
- V Claims 1-24, in part, drawn to products of formula I, and not embraced in Group I-IV; and their methods of use.

Claims 1-24 are drawn to more than one inventive concept (as defined by PCT Rule 13), and accordingly, a restriction is required according to the provision of PCT Rule 13.2.

PCT Rule 13.1 states that the international application shall relate to one invention only or to a group of inventions so linked as to form a single general inventive concept (requirement of unity of invention).

PCT Rule 13.2 state that unity of invention referred to in Rule 13.1 shall be fulfilled only when there is a technical relationship among those inventions involving one or more of the same or corresponding special technical features.

Annex. B, Part I(b), provides that "special technical features" mean those technical features, which, as a whole, define a contribution over the prior art.

Annex B, Part I(e), provides combinations of different categories of claims and states:

"The method for determining unity of invention under Rule 13 shall be construed as permitting, in particular, the inclusion of any one of the following combinations of claims of different categories in the same international application:

(I) in addition to an independent claim for a given product, an independent claim for a process specially adapted for the manufacture of the said product, and an independent claim for a use of the said product, or

(II) in addition to an independent claim for a given process, an independent claim for an apparatus or means specifically designed for carrying out the said process, or

(III) in addition to an independent claim for a given product, an independent claim for a process specially adapted for the manufacture of the said product, and an independent claim for an apparatus or means specifically designed for carrying out the said process..."

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 C.F.R. 1.499, applicant is required, in response to this action, to elect a single invention to which the claims must be restricted.

Claims 1-24 are generic to a plurality of disclosed patentably distinct species comprising for example, the compounds designated as (1) a compound 1, 2 diazole tricyclo ring system not having other heterocycle ring, (2) compound 1, 3 diazole tricyclo ring system not having other heterocycle ring, (3) a compound 1, 2 diazole tricyclo ring system having another heterocycle ring thiazole, (4) a compound 1, 2 diazole tricyclo ring system having another heterocycle ring pyridine.

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The inventions do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding technical features that defines a contribution over the prior art. The compounds claimed contain benzindazole moiety, which does not define a contribution over the prior art (as can be seen by the compound I of CAS:113:152403). Each of the inventions in this applications represent a discrete compound which one skilled in the art which beside sharing no structural element, cannot be said to belong to a recognized class of chemical compounds. Accordingly, the unity of invention is considered to be lacking and restriction of the invention in accordance with the rules of unity of invention is considered to be proper.